

Material Safety Data Sheet
acc. to ISO/DIS 11014

04/08/2002

Revision date: 04/08/2002

1 Identification of substance:

- **Product details:**
- **Trade name: TSO-3100 Black Ink (Pressurized Can)**

- **Product number:** 5750-651

- **Manufacturer/Supplier:**
Diagraph an ITW Company
Marking and Coding Division
1 Missouri Research Park Drive
St. Charles, MO 63304-5685 USA
(800) 526-2531 USA
(636) 300-2000 [Outside USA]
(636) 300-2005 FAX

- www.diagraph.com
E-mail: service@diagraph.com

- **Emergency information:**
Contact Infotrac: (800) 535 5053 (US only)
International: +1 352 323 3500

2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

64-17-5 ethanol	60-80%
67-63-0 isopropyl alcohol	5-20%
71-23-8 1-propanol	5-20%

3 Hazards identification

- **Hazard description:**
Irritant
Highly flammable
- **Information pertaining to particular dangers for man and environment:**
Highly flammable.
Irritating to eyes.
- **Classification system**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA Ratings (scale 0-4)**
Health = 1
Fire = 3
Reactivity = 0

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- **HMIS Rating (scale 0-4)**
 - Health - 1
 - Flammability - 3
 - Reactivity - 0
- **Routes of Entry** Ingestion
- **Target Organs** Eyes
- **Irritancy**
 - Eyes
 - Skin
- **Sensitizing Capability** None known
- **Reproductive Effects** None known
- **Cancer Information** Not known to be carcinogenic.

4 First aid measures

- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact**
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Induce vomiting, if person is conscious. Seek medical help.

5 Fire fighting measures

- **Suitable extinguishing agents** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents**
 - Water.
 - Water with full jet.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
 - Do not allow product to reach sewage system or any water course.
 - Prevent seepage into sewage system, workpits and cellars.
 - Inform respective authorities in case of seepage into water course or sewage system.
- **Measures for cleaning/collecting:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Ensure adequate ventilation.
 - Do not flush with water or aqueous cleansing agents

7 Handling and storage

- **Handling**
- **Information for safe handling:** Store in cool, dry place in tightly closed receptacles.
- **Information about protection against explosions and fires:**
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Store in cool, dry conditions in well sealed receptacles.

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- **Maximum storage temperature:** 120 F (49 C)
- **Minimum storage temperature** 35 F (2 C)

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**

64-17-5 ethanol

PEL 1900 mg/m³, 1000 ppm
 REL 1900 mg/m³, 1000 ppm
 TLV 1880 mg/m³, 1000 ppm

67-63-0 isopropyl alcohol

PEL 980 mg/m³, 400 ppm
 REL Short-term value: 1225 mg/m³, 500 ppm
 Long-term value: 980 mg/m³, 400 ppm
 TLV Short-term value: (1230) mg/m³, (500) ppm
 Long-term value: (983) mg/m³, (400) ppm
 NIC-200; 491; 400; 984; A 4

71-23-8 1-propanol

PEL 500 mg/m³, 200 ppm
 REL Short-term value: 625 mg/m³, 250 ppm
 Long-term value: 500 mg/m³, 200 ppm
 Skin
 TLV Short-term value: 614 mg/m³, 250 ppm
 Long-term value: 492 mg/m³, 200 ppm
 NIC-A 3; NIC-delete Skin

- **Personal protective equipment**
- **General protective and hygienic measures**
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Eye protection:** Tightly sealed goggles.

9 Physical and chemical properties:

- **Form:** Liquid
- **Color:** Black
- **Odor:** Alcohol-like
- **Change in condition**
 Melting point/Melting range: undetermined
 Boiling point/Boiling range: 78°C (172°F)
- **Flash point:** 13°C (55°F)
- **Ignition temperature:** 360.0°C (680°F)
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

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- **Explosion limits:**
 - Lower:** 2.0 Vol %
 - Upper:** 15.0 Vol %
- **Vapor pressure at 20°C (68°F):** 59.0 hPa
- **Density at 20°C (68°F):** 0.798 g/cm³
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix
- **Solvent content:**
 - Organic solvents:** 87.5 %
- **Solids content:** 12.4 %
- **VOC's Lbs/Gallon:** 6.0 Lbs/Gallon

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

12 Ecological information:

- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Comply with all Federal, State, and Local regulations regarding disposal.
- **Uncleaned packagings:**
- **Recommendation:**
Disposal must be made according to official regulations.
Comply with all Federal, State, and Local regulations regarding disposal.

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14 Transport information

- **DOT regulations:**
- **Hazard class:** 2.1
- **Identification number:** UN1950
- **Packing group:** -
- **ERG #** 126
- **Proper shipping name (technical name):** Aerosols, Flammable
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 2.1
- **Item:** 5 F
- **UN-Number:** 1950
- **Description of goods:** 1950 Aerosols
- **Maritime transport IMDG:**
- **IMDG Class:** 2.1
- **Page:** 2102
- **UN Number:** 1950
- **Packaging group:** -
- **EMS Number:** 2-13
- **MFAG:** 620
- **Marine pollutant:** No
- **Proper shipping name:** Aerosols, Flammable
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Packaging group:** -
- **Proper shipping name:** Aerosols, Flammable

15 Regulations

- **Carcinogen categories**
- **EPA (Environmental Protection Agency)**
None of the ingredients is listed.
- **IARC (International Agency for Research on Cancer)**
67-63-0 isopropyl alcohol 3
- **NTP (National Toxicology Program)**
None of the ingredients is listed.
- **TLV (Threshold Limit Value established by ACGIH)**
64-17-5 ethanol A4
- **MAK (German Maximum Workplace Concentration)**
64-17-5 ethanol 5
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.
- **Product related hazard information:**
The product has been classified and marked in accordance with directives on hazardous materials.

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· **Hazard symbols:**

Irritant
Highly flammable

· **Risk phrases:**

Highly flammable.
Irritating to eyes.

· **Safety phrases:**

Keep out of the reach of children.
Keep container tightly closed and in a well-ventilated place.
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
If swallowed, seek medical advice immediately and show this container or label.

· **National regulations**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Other regulations, limitations and prohibitive regulations**· **OSHA Regulations**

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed
OSHA Specifically Regulated Substance (29 CFR 1910.): Not listed

· **Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III, Section 313:**

This product does not contain chemicals listed as toxic chemicals at levels which require reporting under SARA Title III Section 313.

· **CONEG:**

This product has not been tested for heavy metals covered under the various CONEG laws. However, raw materials used to make this product do not contain mercury, lead, cadmium, or hexavalent chromium and none are added during manufacture.

· **Toxic Substances Control Act TSCA Status:**

All components of this product are listed in the EPA's Inventory of Chemical Substances as required under the Toxic Substances Control Act (TSCA).

· **California Proposition 65 (Chemicals known to cause cancer):**

This product contains no ingredients on the California Proposition 65 List known to cause cancer.

· **California Proposition 65 (Chemicals known to cause reproductive toxicity):**

This product contains no ingredients on the California Proposition 65 List known to cause reproductive toxicity.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **MSDS Created By:** J. Wells· **Revision Information (All previous revisions obsolete):**

This Revision: 04/08/2002 Initial Release with new formula.